Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Canceled) A multi-component gas analyzing method using FTIR, comprising:

a quantitatively analyzing a plurality of components in a sample based upon an absorption spectrum obtained by FTIR;

calculating multi-component concentrations from a mixed gas spectrum by using a quantitative algorithm; and

after calculating the multi-component concentrations, correcting for an influence due to a difference in a base gas composition between and exhaust gas and a calibration gaserror in the calculated multi-component concentrations caused by a change in an intensity spectrum obtained by FTIR due to a presence of a coexistent gas in the sample.

2. (Canceled) The method of claim 21, further comprising:

measuring the coexistent gas component using FTIR; and

directly applying resulting data from the correcting calculations.

3. (Canceled) The method of claim 21, further comprising:

measuring the coexistent gas component using a method other than FTIR; and

using an external analyzer to read resulting data from the correcting calculations, wherein time matching is performed by a CPU of the FTIR.

4. (Canceled) The method of claim 1, wherein the correcting step corrects influences due to a difference in a base gas composition between an exhaust gas and a

calibration gas.

5. (Canceled) The method of claim 21, wherein the correcting step corrects influences of coexistent H2O with respect to CO, CO2, NO, and N2O.

6. (Canceled) The method of claim 5, wherein the influence is approximated by a linear equation for a fixed H2O concentration.

7. (Canceled) The method of claim 5, wherein the influence is approximated by a quadratic equation for a fixed H2O concentration.

8. (Canceled) The method of claim 21, wherein the correcting step corrects influences of coexistent H2O with respect to CO.

9. (Canceled) The method of claim 8, wherein the influence is approximated by a linear equation for a fixed H2O concentration.

10. (Canceled) The method of claim 8, wherein the influence is approximated by a quadratic equation for a fixed H2O concentration.

11. (Canceled) The method of claim 21, wherein the correcting step corrects influences of coexistent H2O with respect to CO2.

12. (Canceled) The method of claim 11, wherein the influence is approximated by a linear equation for a fixed H2O concentration.

13. (Canceled) The method of claim 11, wherein the influence is approximated by a quadratic equation for a fixed H2O concentration.

14. (Canceled) The method of claim 21, wherein the correcting step corrects influences of coexistent H2O with respect to NO.

15. (Canceled) The method of claim 14, wherein the influence is approximated by a

linear equation for a fixed H2O concentration.

16. (Canceled) The method of claim 14, wherein the influence is approximated by a quadratic equation for a fixed H2O concentration.

17. (Canceled) The method of claim 21, wherein the correcting step corrects influences of coexistent H2O with respect to N2O.

18. (Canceled) The method of claim 17, wherein the influence is approximated by a linear equation for a fixed H2O concentration.

19. (Canceled) The method of claim 17, wherein the influence is approximated by a quadratic equation for a fixed H2O concentration.

20. (Canceled) The method of claim 21, wherein the correcting step corrects influence caused by a difference in water concentration between exhaust gases and a calibration gas and a change in H2O concentration in a sample gas being measured.

21. (Currently Amended) A multi-component gas analyzing method using FTIR, comprising;

quantitatively analyzing a plurality of components in a sample based upon an absorption spectrum obtained by FTIR;

calculating multi-component concentrations from a mixed gas spectrum by using a quantitative algorithm; and

~~after calculating the multi-component concentrations,~~ correcting for an ~~influence due to a difference in a base gas composition between and exhaust gas and a calibration gas~~error in the calculated multi-component concentrations caused by a change in an intensity spectrum obtained by FTIR due to a presence of a coexistent gas in the sample.

22. (New) The method of claim 21, further comprising:

measuring the coexistent gas component using FTIR; and

directly applying resulting data from the correcting calculations.

23. (New) The method of claim 21, further comprising:

measuring the coexistent gas component using a method other than FTIR; and

using an external analyzer to read resulting data from the correcting calculations, wherein time matching is performed by a CPU of the FTIR.

24. (New) The method of claim 21, wherein the correcting step corrects influences of coexistent H2O with respect to CO, CO2, NO, and N2O.

25. (New) The method of claim 24, wherein the influence is approximated by a linear equation for a fixed H2O concentration.

26. (New) The method of claim 24, wherein the influence is approximated by a quadratic equation for a fixed H2O concentration.

27. (New) The method of claim 21, wherein the correcting step corrects influences of coexistent H2O with respect to CO.

28. (New) The method of claim 27, wherein the influence is approximated by a linear equation for a fixed H2O concentration.

29. (Newl) The method of claim 27, wherein the influence is approximated by a quadratic equation for a fixed H2O concentration.

30. (New) The method of claim 21, wherein the correcting step corrects influences of coexistent H2O with respect to CO2.

31. (New) The method of claim 30, wherein the influence is approximated by a linear equation for a fixed H2O concentration.

32. (New) The method of claim 30, wherein the influence is approximated by a quadratic equation for a fixed H2O concentration.

33. (New) The method of claim 21, wherein the correcting step corrects influences of coexistent H2O with respect to NO.

34. (New) The method of claim 33, wherein the influence is approximated by a linear equation for a fixed H2O concentration.

35. (New) The method of claim 33, wherein the influence is approximated by a quadratic equation for a fixed H2O concentration.

36. (New) The method of claim 21, wherein the correcting step corrects influences of coexistent H2O with respect to N2O.

37. (New) The method of claim 36, wherein the influence is approximated by a linear equation for a fixed H2O concentration.

38. (New) The method of claim 36, wherein the influence is approximated by a quadratic equation for a fixed H2O concentration.

39. (New) The method of claim 21, wherein the correcting step corrects influence caused by a difference in water concentration between exhaust gases and a calibration gas and a change in H2O concentration in a sample gas being measured.